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COMPUTERWORLD



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SEPTEMBER 15, 2008 VOL. 42, NO. 37 S5/COPY

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Proven Success

SAS and Lilly

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Michael C. Heim

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■ EDITOR'S NOTE Don Tennant

An itSMF Chronicle

T'S SUNDAY MORNING, and I'm heading to San Francisco for the Fusion '08 conference organized by the IT Service Management Forum, or ifsMF USA. My main objective is to find out why the organization renders 'TT' in lowercase italics in its acronym. I'm sure there's a really good reason for it, and I intend to find out what it is.

OK, that's not really why I'm going, which isn't to say I'm not curious about it. My mission, rather, is to moderate two extraordinarily compelling panel discussions. The topic of the first one is "Fnahling Service Improvement and Governance Through Technology." The second one is titled "How to Overcome Unique ITSM Challenges Posed by a Global Organization." You hapless journalists covering Sarah Palin, eat your hearts out!

Palin, eat your hearts out! This adventure is just too good not to chronicle, so here I go. Sunday, 9:55 a.m. EDT:

I'm at Boston's Logan International Airport, where checking in at the United Airlines kiosk was a little taxing. I had to pay \$40 to check my two bags (hey, I had reams of ITSM material to study), and I was deposited in Seat 33B on a completely full flight. Six hours and 20 minutes in a middle seat at the very back of the plane. Oh, well. Sometimes the really good assignments call for a little sacrifice. 12:04 p.m. EDT: Here

I sit in Seat 33R with my trusty ThinkPad, writing up my thoughts on unique ITSM implementation challenges. If the lady in 33C could see the screen. I know she'd be impressed. Unfortunately, I can't even see it. The person in 32R has his seat fully reclined, so I can only open my notebook to an angle of about 45 degrees. My elbows are pressed against my sides. I'll have to fix the typos later.

12-23 p.m. EDT: The beverage cart is here. The lady in 33C declined the offer of a beverage until she saw that I didn't have to pay for my cup of luke-

■ You hapless journalists covering Sarah Palin, eat your hearts out! warm coffee. She asked if the drinks were free, and when told they were, she requested a can of tomato juice. "Are the napkins free, too?" I asked. "Yes," the flight attendant responded. "Can I have five?" I asked, just to see what she'd do. Expressionless, she counted out five

and handed them to me. 5:17 p.m. PDT: Here I am at the Moscone Center site of Fusion '08 Registration was a bit complicated because even though my name is listed twice as a panel moderator in the program inside the nifty bag being handed out. I didn't appear on the speaker or attendee registration lists, so nobody seemed to know what to do with me. No way was I getting a badge until the mystery of my presence was solved. Service management at its best. They finally got it sorted out. so I'll get to moderate my panels after all!

Monday, 12:20 p.m. PDT:



Panel No. 1 went just fine. In the hour allotted to us, I was able to pose exactly two questions to my panel. The people in the audience did practically all the questioning, leaving me to nod occasionally and pretend I understood what they were talking about. These ITSM people are really into this sutfi. It's kind of frightening. Mondey, 8:12 pm. PUT: It

seems I can't let go of the nagging question of why the "IT" in itSMF is in lowercase italics. So I spent the past two hours walking up to random attendees to ask them why, and how they feel about it. A couple of them looked like they were ready to reach for the pepper spray, but most of them were good sports. I'm not sure what the answer is, because the only ones who kept my attention were the ones who shrugged and said they had no idea. Whenever anyone attempted to convey a meaningful response, I found my mind drifting. I kept wondering what the flight attendant would have done if I'd asked for 10 nankins. Don Tonnant is editorial director of Computerworld and InfoWorld. Contact him at don tennant@ computerworld.com, and

visit his blog at http://

tennant.

blogs.computerworld.com/

ONLINE CHATTER

RESPONSE TO: Can Web 2.0 Save BI?

If T is scared, it's because careers have ended after taking a chance on a small vendor. The geniuses in charge still perceive IT as pure overhead. Until they understand the importance of IT and reward risk-taking. ClOs selected more for their political acumen than courage will continue purchasing

software from large, established

vendors.

Submitted by: Rex

RESPONSES TO: Counterintuitive Sept. 1. 2008

Sept. 1. 2008

Here's more paradox for Frank
Hayes to consider: When company
loyalty is at an all-time low because
of belt-tightening, corporations
need IT people with knowledge
of the business. Such knowledge
is a result of years of experience in
a corporation are the most expensive
people to employ and thus targets
for belt-tightening. The question
for corporations is, Do you want to

pay for what you want, or do you want to reduce costs?

■ Submitted by: Anonymous

Talking about paradoxes, I should mention the one about how certain technology platforms that require big teams and big budgets to implement (e.g., anything from Microsoft) gain an unfair political advantage over platforms that offer greater functionality and ROI but require smaller teams (e.g., Lotus Notes/Domino). Part of the problem is the old-school mind-set that says the guy with the most people reporting to him is the most important Never mind actual value-add to the organization. And once monev has been spent and livelihoods and reputations are on the line, it's very hard to change course, even if a change of course is obviously in the organization's best interest. Un-

III Submitted by: Kevin Pettitt

JOIN THE CHATTER! You, too, can comment directly on our stories, at computer world.com.

fortunately, technology being the

black art that it is, it's often not ob-

vious to those writing the checks.

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Intel®s New 8008 SSD is Faster Than the Boot HDD Its PENN heart away sales that daily drive laptage are appealer than their fastest heart daily drive counterpart and otherwise about twice the additional twice the sale of the sales of their fastest way of the sales of the sales

Smart Phone Battery Life: 20 Ways to Juice It Up Battery technology hear't logit up with ameri phones'



Get Leopard and
Windows to Play Nice
Whether you're using Macs
and PCs on the came network
or rawing Windows and Leopard on the same system, we
have advice for getting the best
cross-platform experience.

Review: HP c3000 BladeSystem Enclosure It's particularly passed for altuations where there's a need for multiple servers but there len't a designated server room with data-contar-quality provid.

Leading by Letting Go OPMON: People support heat what they hash halfd same former CIO Al Knobler.

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News Digest

THE WEEK AHEAD

MONDAY: Vilware opens its Vilworld 2006 conference is virtualization users. In Lae Veges dece selory, page 1/4/ (MONDAY: Hewlett-Packard holds an analysts meeting on the enterprise IT plans, including the integration of EDS. THURSDAY: Computerworld's divens IT Symposium takes piace in National Harbor, Md., outside of Washington. THURSDAY: Computerworld's Live is 1/4 inaparial results.



In a quest to re-create conditions after the big bang, researchers work ing on the Large Hadron Collider shot a beam of protons around this 17-mile, vacuum-sealed loop buried 50 to 150 meters underground.

ARID COMPUTING

Worldwide Grid Evaluating Collider Test Results

HE SUCCESSFUL test run of a massive particle collider brought scientists a step closer to finding answers to a question that has haunted people for centuries: How was the universe created?

The \$9 billion Large Hadron Collider (LHC), which took some 20 years to build outside of Geneva, last week shot its first beam of protons around a 17-mile, vacuum-sealed loop buried 50 to 150 meters below the ground.

The test was a critical milestone in getting to the project's ultimate goal of shooting two particle beams toward each other at 99.9% of the speed of light. Colliding the beams will create showers of new particles that could re-create conditions in the universe just moments after the big bang that many scientists think created it.

With the test completed, the team of scientists overseeing the III-nation effort is using a worldwide grid of servers and desktops to study the results.

Ruth Pordes, executive director of the Open Science Grid, which was created in 2005 to support the project, said that the U.S. portion of the global computer and storage grid is made up of more than 25,000 mostly Linux-based computers running 43,000 processors.

The grid's machines are housed at several universities, the U.S. Department of Energy and the National Science Foundation.

Science Foundation.

Harvey Newman, a physics professor at the California Institute of Technology in Pasadena, added that there are about 30,000 servers and more than 100,000 processor cores around the

world hooked into grids that support the LHC project. "The distributed computing model is essential to

doing the computing, storage and hosting of the many petabytes of data from the experiments," he added. Newman said that sci-

entists last week sent one beam around the tube and, when that was complete, sent another in the opposite direction. Each beam made one circuit around the accelerator. And they both reached 99.99998% of the speed of light, he said.

The first particle collision should come in days or weeks, said Bolek Wyslouch, a physics professor at MIT, who has been working on the project for the past seven years.

- Sharon Gaudin

NETWORK SECURITY

Tab for Lockup Of City's WAN May Reach SIM

May Reach \$1M

San Francisco officials estimate that IT costs stemming
from a network administrator's alread bilacking of

the city's WAN will total
\$1 million or more.
Ron Vinson, chief adminstrative officer in the city's
Department of Telecommunications and information
Services, said the DTIS has
paid out \$182,000 to Cisco
contractors and \$15,000 in
overtime consts thus far.

Court filings say Childs may have installed a router, still not located, to give him remote access to the WAN.

An additional \$800,000 as been set aside to cover ther expenses, Vinson said, rithout elaborating. DTIS admin Terry Childs

as arrested July 12 on imputer-tempering charg . Prosecutors say he ree asswords to switches and uters in the WAN, blockgother IT workers from coooling them. Childe has ended not guilty.

OBERT McMILLAN, IDS NEWS SERVICE

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PRIVACY

Social Security Numbers **Exposed on Iowa Web Site**

N YET ANOTHER ex-Security numbers. ample of a data privacy controversy affecting county governments across the U.S., documents containing the Social Security numbers of Iowa residents have been posted numbers on the ICRA's IowaLandRecords.org site. since January 2005 on a Web site maintained by the The Web site was largely Ioura County Recorders As-

sociation (ICRA). Meanwhile, a resident of Pulaski County in Arkansas this month began posting internal e-mails from the county clerk's office on his Web site, in retaliation for the clerk's refusal to remove from the county's site public records containing Social

The Iowa case also came to light this month, after The Des Moines Register ran a series of stories about the availability of land records with Social Security

inaccessible for several days after the first story was published, Phil Dunshee, project manager for Iowa-LandRecords org said that the site was overwhelmed by traffic, forcing the server that it runs on to be taken down for maintenance.

The ICRA said Sept. 3 that it would block access to mortgage documents and Uniform Commercial Code financing statements. Dunshee noted that once the site was back up, users would be able to view a document in-

dex but not the full images. However, lovce lensen. chairwoman of the site's governing board, said businesses in Iowa need to eventually have online access to the land records restored.

A state law barring Social Security numbers from being listed in public records took effect in January 2003. But many of the documents on the ICRA's site date from before then. Dunshee said he was preparing an estimate of the scope and cost of a project to redact all the Social Se-

curity numbers. In Arkansas, Pulaski County Clerk Pat O'Brien said the circuit county records containing Social Security numbers and other personal data were posted online in accordance with state laws. He added that he doesn't care about the posting of internal e-mails from his office by North Little Rock resident Bill Phillips. since the e-mails are also considered public records.

Short

12 other filed by shareholders that alleged the company was

Graphics Device Interface Microsoft Office

the state of IT security et

INTERNET

Google Bends to Privacy Critics on Chrome Tool

REACTING TO criticism that its new Chrome browser was enly acting as a luy e inc. last week said it der data an in 24 hours of o

lists related search que and popular Web de d on the text typed by use

To do so, the feature tran its keystrokes to Geogle's servers. The vast majority are deleted as soon as sug are returned, but about 2% are

- Jaikumar Vijayan

But Urs Hölzle, the c ons, said in a blog post th on the concerns and the ta's "limited potential use oogle plans to start and ing it "within about 24 h of receiving it. That is as quic

as part of the Google Tooli

But what sparked the cri over its use in Chrome was O cracy and Tech with Google retaining all of ti search logs and all of the URLs they were typing," she said.

- ORFOR KEIZER





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INTERNET

Big Advertisers Protest Google-Yahoo Search Deal

HE ASSOCIATION of National Advertisers has called on the U.S. Department of Justice to reject a planned point search advertising program by Google Inc. and Yahoo Inc.

The New Yorkbased trade group - which represents 400 companies that spend more than \$100 billion annually on advertising - said "a Google-Yahoo partnership would control 90% of national search ad-

vertising inventory." Under the proposed fouryear deal announced in June, advertisers would pay Google for ads that appear with Yahoo search results. and then Google would pay a portion of the proceeds to Yahoo, Yahoo estimated that the deal would generate \$250 million to \$450 million during its first 12 months. and up to \$800 million annually thereafter.

In a note posted on the ANA Web site, President and CEO Bob Liodice said his group is concerned "that the partnership will likely diminish competition. increase concentration of market power, limit choices and potentially raise prices for high quality, affordable" search ads.

Although Yahoo and Google contended that the deal doesn't need regulatory approval, they did agree to delay its implementation for three and a half months after the June 12 announcement so the Justice Department could review its terms. Internet marketing con-

sultant Andy Beal, said in a blog post that Google and Yahoo are likely surprised at the advertising group's opposition to the deal. The clout of the ANA membership could easily affect the DOI's decision, he noted. "Google and Yahoo

were prepared for some opposi-- hence agreeing to give regulators 100 days to review the deal - but

they probably weren't expecting such stout opposition," Beal said. Both Yahoo and Google

directed reporters to Web sites containing news stories with information on advertisers that support the deal. Heather Havenstein

> Global Dispatches

U.K. Proposes Quotas for Foreign

RETWEEN THE LINES



In their first jointly developed offering since signing a partnership deal in late

optimized Novell's SUSE erating system on Windows Server 2008 machines

update to Dynamics CRM Online, a set of hosted apps filed for Chapter

11 bankruptcy protection, a month after a federal judge

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d \$362,247 (U.S.)

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CRYSTAL REPORTS

Step Into the Ring

**

MWARE INC. expects 14,000 attendees at its annual user conference in I as Vogas this week including workers from more than 200 tradeshow exhibitors. That's a 30% increase over last year's attendance - clear evidence of VMware's influence. But VMworld 2008 will also be the focal point for the gathering storm of competition that the virtualization market leader faces

Among the companies fighting for users at the conference will be the first serious challengers to VMware's dominance of server virtualization. That includes Microsoft Corp., which released its Hyper-V virtualization hypervisor in June, and Cirrk Systems Inc., which today plans to announce a new version of the XenServer software that is acquired last year.

VMware has let competitors set up booths at its shows since the first VMworld in 2004, but it still controls the conference agenda. One scheduled presenter, Simon Crosby, Citrix's chief technology officer, said his slides had "to be vetted by the censors" - a reference to VMware. He added that his talk was "carefully arranged" by VMware to take place in the afternoon on Thursday, the last day of the conference.

last cay of the concrence. Indeed, VMware continues to set the agenda for the entire virtualization market. Rivals and hardware vendors alike have timed product announcements to coincide with VMworld. In addition to Citrix's scheduled rollout, Microsoft last Monday said it would ship free stand-alone version of Hyper-V and an upgrade of Hyper-V and an upgrade of

Continued on page 16



ALTERNATIVE THINKING ABOUT SERVICE MANAGEMENT:

Business Driven. Not Just Büsiness Aligned

Alternative thinking is repositioning (If from the server closet to the front lines, embracing its impact on the business (seeing it go from a PowerPoint* deck into practice).

It's placing business metrics under the microscope every day, every minute, every nanosecond—enhancing Insight and extending control (from a financial perspective, for a change).

It's rewiring the rules of engagement to identify problems, prioritize solutions and automate change (before things become business critical).

It's partnering with HP, a pioneering force behind ITIL, to leverage the experience of certified consultants and utilize the ingenuity engrained in the DNA of our software.

Technology for better business autoames. In cont/pa/servicemen agen en



Continued from page 14 its virtualization management tool within 30 days.

And on Wednesday, Sun Microsystems Inc. — which will also have a booth at VMworld — formally announced its first virtualization offering that supports multiple operating systems.

Also last week, Dell Inc. added two blade servers geared toward virtualization. And Hewlett-Packard Co., which announced a set of virtualization-oriented products two weeks ago, will unveil more offerings today, including a server based on a six-core Xeon processor that Intel Corp. is announcing in conjunction with VMworld.

As competition has picked up, though, VMware has lost its ability to control one important thing: pricing. In July, VMware made

In July, VMware made its low-end ESXi hypervisor available free of charge. Then last month, it adopted a new pricing scheme for its Lab Manager tool for developers, lowering the starting price for deployments from about \$16,000 to between \$2,000 and \$4,000.

Users are taking advantage of the new era of free hypervisors and reduced pricing for the software layered on top of them.

Kevin Sonney, IT manager at iFloor Inc., a flooring retailer in Tukwila, Wash, said if VMware's executives were standing in front of him, his message would be to "stay price-competitive" with Microsoft.

Sonney, who has virtualized his Exchange environment with VMware's software, said he "definitely" plans to test Hyper-V. Cost will play a big role in any decision to switch, although Microsoft's technology has to prove itself as well. "I don't think I would want a cheaper solution if [a server] is going to go down more often," Sonney said.

For Matt Lavellee, director of technology at MLS Property Information Network Inc. in Shrewsbury, Mass., the savings from using the version of Hyper-V built into Windows Server 2008 were an overwhelming advantage for Microsoft over VMware. Lavellee said VMware's software would have accounted for 30% of the real estate listing service's overall IT infrastructure expenses. "Cost is such a driver that unless Hyper-V didn't work.

we weren't going to look at VMware," he said. DANGEROUS TIMES

These are dangerous times for VMware — a fact that if a acknowledged in July, when it ousted CEO Diane Greene — a collegial, research-orienteel leader who was one of its co-founders — and replaced her with one-time Microsoft executive Paul Maritz. In his first press conference, Maritz touted his inside knowledge of Microsoft's battle tactics and said he knew how to defeat the software eiam.

Maritz announced the ESXi giveaway during that same conference call. His appointment and the subsequent pricing moves by both VMware and Microsoft suggest that the competition for virtualization users may mirror the blunt-force browser wars between Microsoft and Netscape in the late 1990s.

For now, VMware's technology still gives it an edge. Rachel Chalmers, an analyst at The 451 Group, said that tools such as VMotion, which lets users do live migrations of virtual machines from one physical server to another, put VMware' in a

very strong position." But rival products are improving. For instance, Citrix's new XenServer 5.0 includes the ability to boot and run a virtual machine on a bare-metal server without a hypervisor, potentially eliminating the performance concerns that often keep IT managers from running mission-critical applications in virtualized environments.

XenServer 5.0 can also manage virtual servers based on Hyper-V and VM-ware's software. Microsoft's new virtualization management tool will be able to control VMware-based servers as well, and Microsoft last week demoed a live-migration feature that's scheduled to be included in

the next release of Hyper-V.
Most vendors won't allow
direct rivals to exhibit at
their own conferences. But
Karthik Rau, vice president
of marketing at VMware,
said the company wants
VMworld attendees to get a
comprehensive view of virtualization technology. VMware is confident that users
will continue to choose its
products. Rau added.

products, Rau added.
Brian Trudeau, ClO at
Ameres Brokers LLC in
Houston, will be at VMwordl
this week. He remembered
scratching his head a year
ago over VMware's decision
to allow XenServer to be
displayed on the trade show
floor. But he welcomed VMware's open approach and
thinks that the heightened
competition will help drive
innovation and reduce costs.

Allowing rivals to take part in VMworld "is kind of a gusty move on their part," Trudeau said. He added that he isn't worried about VMware's prospects, because the company has "the advantage of experience" over its competitors.

Eric Lai contributed to this story.

Cloud

It may be no coincidence that Google Inc. released its Drome browser just the weeks before YMworld. At the very least, it certainly was good liming.

Obrame is designed to be the root and for Web Applications that can be delivered to a varely of client derives. Microsoft may be going after VMware's market have with Hyper I, but Google and other members of the cloud computing crowed are trying to take over the desiktop. In part I, with the beginning through the production of the computing crowd with the beginning through the production of the computing crowd with the beginning throughout the computing crowd with the beginning through the computing crowd with the beginning throughout the computing through the computing crowd with the beginning throughout the computing through the com

technology.
Steve Davidek, an IT manager for Sparks, Nev., who runs VMware-based virtual servers, said hes now seriously looking at desktop virtualization, It's also a lop issue within Connect, an independent Hewlett-Packard user group with about 50.000 members, said Davidek, who serves on the organization's beard of directions.

The economics of desktop according to Davidek, He said a server-based virtualization an proach would let Sparks extend the life of its PCs and then move to lower-cost thin clients later on. That could halve the city's overall desiston costs, he added But Microsoft itself offers desktop and application vii tualization technologies - and even some VMware customers are turning to those products. For instance Heidelberger Druckmaschinen AG rolled out VMware's software at the But the Germany-based maker ily a Microsoft and SAP shop And CIO Michael Neff said it used Microsoft's Application Virtualization, or App-V. sof

its PCs from 21,000 to 500

taking on man-eating plants. easy.



1. Know your leafy enemy. What changed your dusty, dired-o

ivnas cnanged your oussy, dried-out office plant into a bloodthirsty menace? Will you be held responsible for the workloads of your devoured coworkers?

2. Office coffee.

This works well against so many office threats. The more overprewed, reheated, and dirty-pot-prepared, the better. Two pots and it's over.

3. The junk food attack.

In the afternoon, when energy is low raid the vending machine and fill the Man Eating Plant with snacks, chips, cookies, etc. Puts you light to sleep.—the Plant too, we bet



Ne mean literally. Disguise yourself as a plant—a leafy tern, perhaps—to escape arnivorous. Plant scrutiny. Helps you iscape boss scrutiny as well.

5. Weed spray This is generally hasty stuff

bis there are plenty if organic weed sprays in the market Aris 1 Man Eating Plant

taking on security threats. easier.

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Target Pact Won't Lead to Web Access Standards

Legal experts do expect that the settlement will prompt upgrades of many retail sites. By Heather Havenstein

signed last month by Target Corp. to resolve a classaction lawsuit charging that its Web site isn't fully accessible by blind persons won't become the basis for online-accessibility standards, said the National Retail Federation.

A spokesman for the Washington-based trade association, which represents more than 1.6 million U.S. retailers, said that a broad spectrum of retail companies and trade groups would have to be included in any standards discussions "For standards to really

work, they can't be dictated by a single entity," said spokesman Scott Krugman.

"They need to be put together as a collaborative parties; standards also need to have flexibility," he added. "There are so many different retailers with so many different levels of sophistication with their Web sites, it is very difficult to force standards this prematurely."

process with all interested

The agreement signed by Target settled a 2006 classaction lawsuit filed in federal court in San Francisco by the California chanter of the National Federation of the Blind (NFR) and several individuals

The suit claimed that the retailer's Web site violated state and federal laws prohibiting discrimination against people with dis-

As part of the settlement. announced on Aug. 27. Minneapolis-based Target

is creating a \$6 million fund against which plaintiffs can make claims. The retailer also agreed to undate its Web site so that blind users running screen-reader software have access to the same features all other users do, and to let NFB personnel regularly test those improvements once they are completed early next year.

The settlement also requires Target to hold periodic training sessions for its internal Web developers.

and to provide federation officials with a quarterly summary of complaints received about accessibility. Target has already made "significant enhancements"

to improve the accessibility of its Web site, said Steve Eastman, president of the retailer's Target.com unit, in a statement. He added that Target is working with the NFB to further refine its site.

Krugman said that the pace of technological change makes it difficult for many retailers to offer the latest innovations for disabled people on their Web sites.

"In a lot of cases, retailers are moving as fast as the technology is allowing them to," he said, "The freader) technology is more advanced than the Web sites themselves. Retailers are certainly not looking to alienate their

customer base " Some legal experts said that the case may serve to expand the scope of how state and federal disability laws affect Web sites

H. Scott Leviant, an attornev who handles classaction lawsuits and writes The Complex Litigator blog, said he believes that the Target settlement will prompt many retail companies to improve online accessibility.

The settlement should help bring "into focus" the question of how the Americans with Disabilities Act applies to Web sites and should convince retailers to move quickly to help users. Leviant said in a blog post

He called on online retailers to move quickly to enable visually impaired nersons to more easily access their sites.

Even before the settlement, some companies had decided to make changes to avoid litigation and "probably to foster more goodwill with consumers." Leviant said. "Following Target's settlement, I think it is likely that online retailers can expect a rapid surge in litigation of this type."

Marc Maurer, president of the NFB, called the Target settlement a positive development for all blind customers. And, he said in a statement, "it is our sincere hope that other businesses providing goods and services over the Internet will follow Target's example."



THE GRILL

Kishore Swaminathan

Accenture's chief scientist talks about redefining the CIO's territory, restructuring IT's role and bringing consumer power to corporations.

Dossier

TITLE: Chief eclerates

MALI grutneggA :NOTTATHABRO LOCATION: Chicago

FAVORITE TECHNOLOMES

SOPHY IN A NUTSHELL:

DREAM JOB: "My current ich." LAST BOOK READ: Life of Pi.

ROLE MODEL: "A

Accenture chief scientist Kishore Swaminathan envisions the advent of a new cornorate IT department. It includes a continual shift away from building and maintaining enterprise applications and a new role for IT executives as chief intelligence officers. This new breed of IT executive will develop and oversee how companies collect, store, combine share, analyze and capitalize on their most valuable corporate asset - huge volumes of data.

What's driving this shift you foresee? Some of the drivers are well known, such as the increasing cost of maintaining legacy systems. As much as 50% of IT budgets is spent maintaining legacy

systems and maintaining infrastructure There's also a recognition that a lot of things that companies and CIOs used to have to do are not value-added.

As we keep hearing more and more about things like Web 2.0 and how teenagers are using Facebook, companies are asking, "How can it be that the use of the same technology [that] is so empowering to the individual is so stra-



For ClOs to move up the curve, they have to get rid of things they're currently doing so they can focus on bringing the same power IT has in the consumer space.

tegically unimportant to a company?"
If has been revolutionary for individuals. They can work from anywhere, access information from anywhere, build social groups and publish
for free. Meanwhile, the value of IT for
corporations is always under debate.
Such a mismatch is not sustainable in
the lone run.

Are changes happening already? Employees have Gmail accounts because their company mailboxes are too small for even company-related video. People are using Facebook to do company-related collaboration because it's easier. This is stepping into CIOs' territory. Should CIOs be redefining their territory?
The role of IT in most large companies got defined by Y2k, the recession that followed the dot-com bust and Sarbanes-Oxley. All three defined the role of IT and the job of the CIO as one of standardization and control — minimizing risks and reducing costs.

But CIOS and business folks are seeing that IT is a terrible thing to waste. They have to go from using technology for standardization and risk minimization to using IT for reward maximization. They're seeing that happen in the consumer space and should be trying to reap the same benefits.

New? Eliminate what you do not have to do linternally). Three to four years ago, ClOs had no option except to run a data center, no option but to run hardware and software internally. The one very important trend now is cloud computing — hardware clouds, software clouds and process clouds.

Cloud computing hasically enables the ClO to get rid of non-value-added, nondifferentiating things, starting with hardware infrastructure, followed by commodity software infrastructure, followed by desktop applications, which are now offered by Google.

So, what's left? The data. When you adopt a cloud fill rachitecture, the data lives in different places across te Internet. You have to almost completely rethink how you manage and gowern data that lives in multiple places. IT has to define the data governance policy and build a port around the data to keep it clean. IT, as the data port commander, ensures privacy and security and deals with compliance issues related to data.

And the CIO? The CIO used to he the chief infrastructure officer. If not infrastructure officers, they were applications officers. Now they have to take control of data and evolve into the chief intelligence officer.

Basically, the argument that I'm making is that for CIOs to move up the curve, they have to get rid of things they're currently doing so they can focus on hringing the same power IT has in the consumer space to the corporate space. If, for example, a CIO can stan-

dardize a mashup development environment and make data from hack-end systems easily available, they empower the end user to huild the applications they need.

What do you see as the key technologies on the horbzon' One is the emergence of a new protocol called REST [Representational State Transfer]. Like SOAP, it's a way of getting data out of hack-end systems. SOA is based on SOAP. But SOAP is so complex, you would use it only for extremely secure, long-running transactions.

REST makes it much easier for companies to publish data and for mashups to pick up that data. REST is important [because] in the last 12 months, all of the hig online companies, including Google and Yahoo, have thrown their weight behind it as a way of publishing data.

Also important are widgets, which enable people to create a simple user interface. This combination of REST as a simple way to get data, mashups as a way to gather and mix data, and widgets as the interface is soing to be powerful.

What skills do corporate IT departments need to make this vision a reality? Skills will aggregate around data, data semantics, how to use unstructured information from the public domain. Skills are going to be around data architecture more than system architecture. The ability to analyze data — and the people who have pattern-recognition skills — will become more and more valuable in IT decortments.

Today, the CIO commands a group of programmers, and the husiness comes to IT asking them to huild applications. That situation will change to where the new chief intelligence officer - which could be multiple people - commands a group of husiness analysts and quantitative gurus and people with machine learning, operations, research and data architecture skills The business will come with a request for them to architect their data or to find profiles within their data, such as the most loyal customers. The valueadd the IT department will provide is not an ERP system, but intelligence that exists in data and that requires very complex skills to find.

- Interview by Julia King

Steven J. Vaughan-Nichols

Why Chrome Won't Rule the World (Yet)

LIKE GOOGLE'S new Chrome Web browser a lot as in, I think it's going to change the desktop world in a way we haven't seen since Marc Andreessen and Eric Bina released the first modern Web browser,

Mosaic, back in 1993.

What Chrome brings to the table are behindthe-scenes features like V8, a killer multithreaded JavaScript virtual machine. V8 compiles Java-Script code directly into machine code instead of interpreting it as most IVMs do. The result is that Web-based applications written in JavaScript - like, say, Google Gmail. Google Docs and Google Maps - run much, much faster than they do on other browsers.

How much faster? I put Chrome, Firefox 3, Safari 3.1.2 and Internet Explorer 7 on the SunSpider JavaScript benchmark racetrack, and this is what I found: Chrome won, running away with a mark of 1.975.0 milliseconds. Firefox 3.0 came in second. with 3,125,2 msec. Safari. which uses WebKit, the same open-source browser engine as Chrome, took third. with 4,006.8 msec. And IE - oh, the shame! It came in dead last, with a mark of 32,221.4 msec. Fast enough for you?

Chrome also runs Java-Script programs with multiple processes. The short explanation of why this is good is that each browser tab can run its own IavaScript program. That way, if a program freezes up, it doesn't stop the rest of the applications or the browser. They contime on as normal. Compare that with your usual run-of-the-mill browsers. With them, if one JavaScript program goes blooey, everything comes

Put this and Chrome's other improvements together, and what you have
isn't a browser anymore.
It's an application platform. Some are saying it's
a direct challenge to Windows. It's no. But it is one
giant step toward making
Web-based applications —
especially Google apps.

to an abrunt halt.

■ Chrome is one giant step toward making Web-based apps a real threat to Microsoft Office.

naturally — a real threat to Microsoft Office.

to Microsoft Office.
Combine this with other
trends, and I can easily
see millions of people ussing cheap PCs powered
by desktop Linux and
connecting to Google applications with Chrome as
their interface. Why pay
for Windows and Office
when you can get all they
can do for next to nothing?

Chrome, however, is not ready to take over the desktop world quite yet. The browser still has security problems. I'm not sure there will ever be a Web browser without security troubles, but Chrome seems to have more than I would have expected. Of course, it has been in the workshop for over two years, and this is its first visit to the real world. In addition. Chrome is open source, and security bugs tend

to get squashed faster in open-source projects. Chrome also uses more memory than I expected, especially since Google says it has been



trying hard to get rid of memory leaks. I'm not sure, though, that what I've seen is the whole story. Chrome was designed to be better at managing memory after it has been running for a long time with multiple applications. In other words, it was meant to perform best in real-world conditions. In any case. it's a beta program. Beta programs always use more memory than final

So, is Chrome ready to topple the desktop world and replace it with one where applications live on the Web? No, not yet. But that world is coming.

I'm quite serious. It may not be Chrome itself that ushers in that world; it may be Firefox with Chrome's goodness baked in. (Hey, it's open source; you can do things like that.) But I have no doubt that the PC-centric world we've grown to think of as normal since the 1980s is about to change to one where PC- and Webbased applications are equally important.

Where does Microsoft fit into that world? Ball-mer and company are in deep, deep trouble.

Steven A. Yuaghan-Bichels has been writing about technology and the business of technology since CF/M-80 was cutting edge and 300bit/sec. was a fast Internet connection — and we liked it! He can be reached at sim@unal.com.

RFID:

LTHOUGH RFID (S dairy farms more er reason the USDA could mandate ear-mounted RFID taos with unique 15 digit identifiers; to secure the nation's milk supply

Today, milk from one farm is mixed with other farms' milk at the dairy," and it's impossible Reynolds, a clinician at the School of Veterinary Medicine at the University of California, Davis "If you wanted to cause trouble, by adulterating one tank (of milk), you'd cause a lot of trouble Interest in tracking milk from a dairy farm to the grocery store peaked after the 9/11 attacks but waned over time. "The food security thing just sort of dropped off the

radar." Reynolds says. But Tom Sarosy, man ager of Fair Oaks Dairy Farm in Fair Oaks, Ind. security is inevitable. He envisions a world where milking parlors require

increases in productivity can make a big difference Dairy farm operators

now use communications technologies such as wired Ethernet Rhietooth Wi-Fi Biometric sensors include pedometers that measure each cow's activity level. and emerging temperaturesensor technologies that detect reproductive best cycles. and early signs of illness. Computerized systems in the barns, in the back office. at feed-mixing stations and in the milking parlors are now integrated and centralized around ISO-standard passive RFID tags, each with a unique, USDA-

approved 15-digit identifier. a means for ongoing, realformance of the business cows," says Terry Smith. Strategies LLC, a consultancy in Bruce, Wis.

Overall, about one in five dairy operations uses onfarm computers, according to the USDA - a growth rate of about 14% since 1991 - and penetration is much

RFID tags were used on about 9% of dairy cows in 2007, according to the USDA. but adoption is increasing rapidly. The reason: At \$2 to \$3 per tag, RFID systems are just beginning to replace proprietary transponder tags that can cost more than 20 times that. But if the advent of inexpensive, industrystandard RFID tags and readers has dramatically cut costs for dairy herd identification Continued on page 26

and RFID. IP video cameras monitor animals in the barns.

"These systems provide time monitoring of the perright down to the individual president and CEO of Dairy

Mary Wilson, president of higher in large farms, say Thomas Farms of Garland dairy system vendors. Maine Inc., which manages **COW TARRING** about 420 dairy cows. And in a capital-intensive business with tight margins, small

Dairy farmers are milking wireless, RFID and sensor technologies to keep herds fat, happy and profitable.

By Robert L. Mitchell

HEN retailing giant Wal-Mart Stores Inc. began its push to integrate state-of-the-art radio frequency identification technology into its supply chain four years ago, the world took notice. But one industry might have greeted the announcement with a collective ho-hum. Dairy farms, which began using computerized record management systems in the 1950s, have been using electronic smart tags and sensors to manage dairy bends since the early '80s

Since 1991, the number of dairy farms in the U.S. has dropped by more than half, to 75 140, and the remaining farms are getting bigger. As dairy farms consolidate and expand, they are increasingly relying on a range of IT systems, sensors and wireless technologies to support that growth.

Dairy operations use

technology to help improve

production. The result: Milk

by about 15% over that same

period, according to the U.S.

Department of Agriculture.

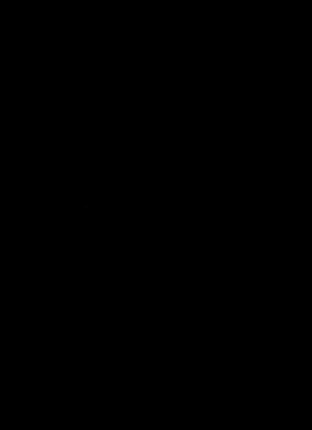
"As you get bigger, having

information at your fingertips

is a lot more valuable," says

output per cow has increased

health, breeding and milk



RFID:

One Cow At a Time

LTHOUGH RFID is helping to make dairy farms more productive, there's another reason the USDA could mandate ear-mounted RFID tags with unique 15-digit identifiers: to secure the nation's milk supply.

Today, milk from

one farm is mixed with other farms' milk at the dairy," and It's impossible to track, says Dr. Jim Reynolds, a clinician at the School of Veterinary Medicine at the University of California, Davis "If you wanted to cause trouble, by adulterating one tank (of milk), you'd cause a lot of trouble. Interest in tracking milk from a dairy farm to the grocery store peaked after the 9/11 attacks but waned over time, "The food security thing just sort of dropped off the

radar," Reynolds says. But Tom Sarosy, man ager of Fair Oaks Dairy Farm in Fair Oaks, Ind. says he thinks increased security is inevitable. He envisions a world where milking parlors require security card access, every load of milk is coded. and truck routes to the processing plant are carefully tracked. "I think it's sad, but I think it will happen," he says. - ROBERT L. MITCHELL

increases in productivity can make a big difference. Dairy farm operators

now use communications technologies such as wired Ethernet, Bluetooth, Wi-Fi and REID IP video cameras monitor animals in the barns Biometric sensors include pedometers that measure each cow's activity level and emerging temperaturesensor technologies that deteet reproductive beat eveles and early signs of illness. Computerized systems in the barns, in the back office. at feed-mixing stations and in the milking parlors are now integrated and centralized around ISO-standard passive RFID tags, each

approved 15-digit identifier. "These systems provide a means for ongoing, realtime monitoring of the performance of the business, right down to the individual cows," says Terry Smith, president and CEO of Dairy Strategies LLC, a consultancy in Bruce, Wis.

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Overall, about one in five dairy operations uses onfarm computers, according to the USDA — a growth rate of about 14% since 1991 — and penetration is much higher in large farms, say dairy system vendors.

COW TAGGING

RFII tags were used on about 9% of dairy cows in about 9% of dairy cows in 2007, according to the USDA, but adoption is increasing rapidly. The reasons At \$2 to \$3 per tag, RFID systems are just beginning to replace proprietary transponder tags are just beginning to replace proprietary transponder tags that can cost mere than 20 times that. But if the advent in the property standard RFID tags and readers has dramatically cut costs for dairy herd identification. Cantinued on page 26

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neros since the conty 868 Since 1991, the number of dary farms in the US. has dropped by more than half, to 75,140, and the remaining farms are getting bigger. As dary farms consolidate and expand, they are increasingbrelying on a range of ET systems, sensors and wreless technologies to support that growth. Dairy operations use technology to help improve health, breeding and milk production. The result Milk output per cow has increased by about 19% over that same period, according to the U.S. Department of Agriculture.

"As you get bigger, having information at your fingertips is a lot more valuable," says Mary Wilson, president of Thomas Farms of Garland Maine Inc., which manages about 420 dairy cows. And in a capital-turnerive business with right margins, small

Farm Facts Percentage of dairy terms that use on-farm computers: 19.4% Percentage of dairy

farms that use off-far computers: 4 increase in use of on-farm computers, 1981-2007: 13

The Business Value of Wireless Integration

A unified-based approach takes the fuss out of desktop and mobile voice while offering productivity, cost and management gains.

Consider this: A high-end hotel resort wanted its staff to be able customer service for its guests. However, the resort's voice communications system held the business back from achieving this goal.

For instance, if a guest needed fresh linears, resort staff would be taken the two with off the housekeepers to return to the main either have to wait for the housekeepers to return to the main either head of their shift on have them pick up their messages, so the message, And a horte manager who wanted to schedule a limounessage, And a horte manager who wanted to schedule a limounessage, And a horte manager who wanted to schedule a limounessage, And a horte manager who wanted to schedule a limounessage in the results and have for find a host plone and there is not a result was a basic deals. This communications shader result-ed in the notestial for delawer dustomer service.

To speed communications, the resert considered supplying cell phones to the staff or allowing them to use their own phones and then reindures them. However, recert executives worked that typing to track employee' cell phone numbers and ensuring they weren't using the phones to call outside of the horders as to much of a management and financial burden. They also realized that users would be operating on disputate systems with no common directory or roticemall, so they wouldn't be able to easily contact one another or be altered to measures.

Instead, resort executives turned to a wireless integration solution from Sprint that allowed them to solve all of these challenges at once. They provided service staff, including bousteepers and hotel managers, with secute mobile phones that link into the resort's PSI. Now staff can place and receive four-digit calls as well as access a centralend write mallow that includes messages for their mobile and deak phones without draining minness. The solution enables staff to alter one another to guest needs even if they

are away from their desks. In addition, managers can set policies that block users from making outside calls.



Michael Ladam, the program manager for Business Communications Services at Prent 8 odlivnnés Stretaceat dirision, says he sees more organizations like this turning to integrated solutions to get out of the rabbit hole they've created with voice communications. Separate landing and mobile phone numbers and mailbours make it more difficult for collegues to reach workers quickly and for workers to keep track of their messages."

In addition, this management of dual systems is costly for companies. "Some companies are treating the financial and productivity inefficiencies of separate mobile and direct phones as a necessary evil. but they're not looking at the biager picture." he says.

Wireless integration offers companies of all sizes whose employees do a mix of desktop and mobile work—such as first responders, sales forces and field technicians—a way to improve communications, boost productivity and reduce management headaches.

"Fover and fewer people are sitting at their desks, yet companies are placing a higher permium on communications. People need a way to reach each other through a single interface without increasing management, Ladam say. "When workers on the road can easily be accessed by customers and co-workers, then you provise richer information, and knowledge flows throughout your organization." he says. Ladam adds that compliance will also be a driver for medding enterprise and modible wice systems, because companies will need to be able to log and audit employers' desktop and modible call active.





BENEFITS ABOUND

While some companies are worried they'll have to overhaul their entire voice strategy to achieve these goals, Dan Jacobson, portion manager for fixed mobile comprence solutions at Sprint, says Sprint Wireless Integration benefits enterprises in three key areas: lower cost, ability to use and possibly reduce existing infrastructure, and increased productivity.

"Sprint Wireless Integration provides additional Inform cost swrings because mobile cults routed to and from the customer's permise-based PSX are considered 'to-ner' and don't incur mobile usage charges,' Jacobson says. Mobile-to-international calls also can be routed through the customer's PSX or international VPX, resulting in significantly reduced rates. In addition, enterprises can be publicles that limit who can call where and when on the mobile device, so they don't wind up with surprise charges each month."

For our transportation company, a ward just the call assigns that interested it in wineiss integration; it as the need to reduce telecom interatructure costs. The company wand to continuinte PSR hardwart at its branch effices so on other instincnance would not be needed at each heartien. Using Sprint wiferest languration, the transportation company has been able to deep from more than one handed PSRs to a complet donetrate of the continuity of the contract of the state of the contract of the contract of the contract of the sage exceptive wide adult, more and changes from a contral contract action of the contract of the contract of the contract contract of the contract of th

Companies have also seen infrastructure savings by being able to eliminate desktop phones for users who are mostly mobile, while still providing desktop phone features as well as access to a centralized voice mailbox. For instance, insurance claims adjusters who spend the majority of their time in the field can be

"Some companies are treating the financial and productivity inefficiencies of separate mobile and direct phones as a necessary evil, but they're not looking at the bigger picture."

-Michael Ladam, Program Manager, Business Communications Services, Frost & Sullivan Stratecast Division

assigned a company Direct Dial-in identification number through the PBX that is instantly routed to their mobile device. When they call a customer via their mobile phone, caller ID and dial-back will shore the corporate number instead of their mobile number.

By slimming down desk phones, an organization can also reduce the number of PBX trunks it needs on-site and the complexity of managing a woice network. For instance, a company can roll its Sprint services, including MPLS and wireless integration, into a single bill to save time and money for the billing team.

One of the guester benefits of wireless integration is the shift by the connect employee and customers quickly regardless of the voice communications channel they are using for instance, companies can use the service to ensure that customers always resulments are sufficient to the contract and the service of the contraction of the contract and the contract and the contraction contracts are contracted as not provide the shared models of phones during a conference call without having to deep of and cannot be contracted as the contract and contracts of the careful of their effects to need insing the interse-critical calls.

All of these features help users maintain a strong connection to the office and their customers, according to Ladam. "Wireless integration is a great way to eliminate the confusion that can arise from multiple voice systems," he says.

GETTING STARTED

To determine whether Sprint Wireless Integration is right for your enterprise, pushoon recommends using Sprint services, while help you determine the total cost of ownership of your desktop and mobile our invarients. Well look at what you're spending today and what you'll seven our tranking and other areas. Then you can more on to a productivity assessment, be says. With Sprint Wireless Integration, you'll see an immediate decrease in your work communications spend. Constar a Sprint representative today to find out the cust efficiencies and productivity improvements that and we make the productivity improvements that and the cust efficiencies and productivity improvements that and the cust efficiencies are considered to the customer and the customer and

Sandra Gittlen is a Massachusetts-based technology writer and former senior editor at Network World.

COVER STORY

Continued from page 23 systems, it has also upended vendor business models by shaving lucrative hardware margins and opening the market to new competitors.

Traditionally, tags have been provided by milk machine manufacturers.

"They've started selling systems with the 33 lindustrystandard RFID tags, but they hate it because profit margins went from 90% to zero," says Steve Eicker, vice president of Valley Agricultural Software (VAS), a maker of dairy management software in Tulare, Calif. "The new tags are a commodity."

Thomas Farms has been using electronic tags to help manage dairy operations since 1987. The dairy first deployed electronic ID tags to identify cows and monitor feed consumption. Today, it uses collar-mounted transponders from milk machine manufacturer BouMatic LLC that act as ID tags and pedometers, "We use that pedometer datal to tell if a cow is in heat or sick. If she's overly active, she could be ready to breed." Wilson says.

The milking system identifies the cow, measures milk weight and other data, and pushes it into a VAS Dairy-Comp 305 dairy management system in the back office. That system matches up the data with veterinary visits, vaccinations and other infor-

mation for every animal and issues reports and to-do lists. Wilson's one complaint is the cost of the tags, which, at \$115 per collar, add up quickly in a 400-cow herd. "If you find a cow running around without her collar, you start running around."

looking for it," she says. But costs are dropping like cow pies. The USDA is pushing, but has not yet required, standard RFID REARLEG

In some cases, cows with RFID ear tags have a second chip implanted in a rear leg. This lets one person with a mobile wand reader scan the cow and perform other tasks such as vaccinations, which usually require access to the rear of the animal. If the cow has only an ear chip, one per son scans the animal while a sinns while a sinns while a sinns while a sinns while a

STOMACH

Bobus sensions that monitor a cow's heart rate, stomach PH, and body temperature or movement may be inserted into the cow's stomach, information from the bobus may be transmitted to a repeater in the per, which relays data to a base station in an office. Alternately, data may be garthered by an RFU reader in a pen or milking-partor gate. The data gathered is integrated with the back-ered dairy

FARS

RFID tags attached to each cow's ear are read when the animal passes frough the milking-parior pate, or they when the workers carrying mobile wand readers. The cow's identification, along with milking machine, is passed automatically to the dairy management cold dairy management cold war in the back office.



tags for tracking purposes. BouMatic's proprietary transponder tags, which are read as each cow enters the milking pation, do not comply with the USDA's standards. But both farmers and vendors believe that standard tags will eventually be required. So Hanford, Califbased John Visser Dairy - with 16.000 cows in four -

locations - was one of the

first to transition to a new BouMatic system that uses ISO-standard RFID tags. These are sourced from All-Flex USA Inc., a major tag producer.

"We expanded our herd and didn't want to spend more money for the big transponders and [standard] RFID tags," says Visser Dairy general manager Brian Schaap. Altbough BouMatic transponders cost \$25 each, Schaap is paying just \$2.50 per RFID tag, and the USDA-compliant tags are saving thousands of dollars in sensor-tag costs.

RFID ROUNDUP

Schaap also uses those same RFID tags outside of the milking parlor, where about half of dairy farm labor costs are incurred. Herdsmen now use HP iPaq Pocket PC handheld computers and scanning wands with Dairy-Comp to identify animals that need various services. The 3-foot orange wands read the tag on each cow's ear and transmit the ID number to the handheld via Bluetooth wireless technology. As each cow is scanned, the iPaq checks the ID number against a work list. It then sends an audio message to a Bluetooth headset, tell-

ing the worker what the cow needs, such as a vaccination



or a pregnancy check. At the end of the day, workers put the iPags into docking stations that upload the data to the dairy management system by way of a USB or Wi-Fi connection. The system improves accuracy and saves labor by allowing one person to perform tasks that previously required two or three people, says Schaap.

Bluetooth was the real breakthrough in that system, not the RFID tags, Eicker says. Older systems requires workers to bring a laptop into the barn and use a wand connected by a long cable to read the ID tags. "If you've been around cows, the word for that is struid." he says.

The government's 15-digit bovine ID standard and the ISO-compliant RFID tags provided a common identification technology that is lowering costs, Eicker says, but "Bluetooth was the technology that got rid of the wires and broke this open."

Technology also plays a key role in feed management. At Diamond S Ranch in Waterford, Calif., manager Tom Sawyer uses i Paqs and Wi-Fi links to monitor the feed mix provided to about 1,300 cows. "We feed for performance. That's where

the money is," Sawyer says. Cows that are at the peak of their lactation cycles and are producing more milk get more-expensive feed. Others get a less-expensive mix. Each recipe has a combination of four ingredients that are loaded into a mixing wagon. An HP iPaq computer interfaces with a scale in the wagon and displays on an LCD panel which ingredients to add and when to stop. The iPag is also used for data entry, and all feed purchases are time- and date-stamped as they arrive. As workers load the wagon.

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"From the standpoint of watching the bottom line, it is the most valuable program I have," he says. "Income above feed costs is the name of this game," he adds, noting that using a feed management system has resulted in a 10% reduction in money spent on feed.

BOVINE BIOMETRICS
Pedometers have been in use for years, and some farms are experimenting with other biometric sensors as well.

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Af Fair Oaks Farm in Fair Oaks, Ind., manager Tom Sarosy is already mining operational data in new ways. "I'm constantly looking at it to see if there's a weak spot." he says.

On the other hand, Sarosy says, dairy farms could suffer from information overload if the number of IT systems and sensors — and the amount of data they produce — keeps increasing.

Creating lists of cows that might have problems based on biometric readings could become a distraction. The danger, says Sarosy, is that sensors "shift the focus to the technology instead of the cows."

■ COVER STORY

Continued from page 23 eystems it has also upended vendor business models by shoving becrative bardware marrins and opening the

market to new competitors. Traditionally, tags have been provided by milk machine manufacturers. "They've started selling systems with the \$3 [industry standard REIDI tags, but they hate it because profit margins went from 90% to zero." says Steve Ficker, vice president of Valley Agricultural Software (VAS), a maker of dairy management software in Tulare, Calif. "The new tags are a commodity."

Thomas Farms has been using electronic tags to help manage dairy operations since 1987. The dairy first deployed electronic ID tags to identify cows and monitor feed consumption. Today, it uses collar-mounted tranenonders from milk machine manufacturer BouMatic LLC that act as ID tags and pedometers, "We use that [pedometer data] to tell if a cow is in heat or sick. If she's overly active, she could be ready to breed." Wilson says.

The milking system identifies the cow, measures milk weight and other data, and nushes it into a VAS Dairy-Comp 305 dairy management system in the back office. That system matches up the data with veterinary visits. vaccinations and other information for every animal and issues reports and to-do lists.

Wilson's one complaint is the cost of the tags, which, at \$115 per collar, add up quickly in a 400-cow herd. "If you find a cow running around without her collar. you start running around looking for it," she says.

But costs are dropping like cow pies. The USDA is pushing, but has not yet required, standard RFID

REARLEG

me cases, cows with RFID ear tags have a second chin implanted in a rear lan This lets one person with a nobile wand reader scan the cow and perform other tasks such as vaccinations, which usually require access to the rear of the animal. If the cow has only an ear chip, one per son scans the animal while a second person performs the lask

COW TECHNOLOGY STOMACH

Bolus sensors that monitor a cow's ous sensors that fromtor a cow temperature or movement may be poorted into the course stomach Information from the bolus may he transmitted to a reneater in the nen which relays data to a base etation in an office. Alternate dala may be gathered by an RFID reader in a neg or milking-parlor gate. The data gathered is inte-orated with the back-end dairy anagement system

FARS

RFID tags attached to each cow's ear are read when the animal passes through the milking-parlor gate, or they may be read by workers carrying mobile wand read-ers. The cow's identification along with milk volume and other data nathered by the miking machine, is passed automalically to the dary management soft ware in the back office.



BouMatic's proprietary transponder tags, which are read as each cow enters the milking parlor, do not comply with the USDA's standards. But both farmers and vendors believe that standard tags will eventually be required. So Hanford, Califbased John Visser Dairy - with 16,000 cows in four

locations - was one of the

ercinas:

ost everything we do h a dairy cow, we do from the back," says Steve Eicker, vice president of Valley Agritural Software, a maker of airy management software. But current governn

cifications call for RFID s to be placed on the ear. So because tags are cher ne farms are experi-

RouMatic system that uses ISO-standard RFID tags. These are sourced from All-Flex USA Inc., a major tag producer.

"We expanded our herd and didn't want to spend more money for the big transponders and [standard] RFID tags," says Visser Dairy general manager

Brian Schaap, Although ting with a second tag danted in the rear leg as a complement to the one on the ear. That would make it ssible for vaccinations a other jobs that happen at the animal's rear end to be performed by just one person It also gives each cow two unique numbers, one rec sized by the USDA and a ond that must be tracked and matched up by the dairy

ment software.

- ROBERT L. MITCHELL

\$25 each. Schaap is paying just \$2.50 per RFID tag, and the USDA-compliant tags are saving thousands of dollars in sensor-tag costs.

Schaap also uses those same

REID ROUNDUP

RFID tags outside of the milking parlor, where about half of dairy farm labor costs are incurred. Herdsmen now use HP iPag Pocket PC handheld computers and scanning wands with Dairy-Comp to identify animals that need various services. The 3-foot orange wands read the tag on each cow's ear and transmit the ID number to the handheld via Bluetooth wireless technology. As each cow is scanned, the iPag checks the ID number against a work list. It then sends an audio message to a Bluetooth headset, telling the worker what the cow

needs, such as a vaccination

or a pregnancy check. At the end of the day, workers put the iPags into docking stations that upload the data to the dairy management system by way of a USB or Wi-Fi connection. The system improves accuracy and saves labor by allowing one person to perform tasks that previously required two or three nounds saves Scham.

Bluerooth was the read breakthrough in that system, not the RFID tags. Eicker says. Older systems required workers to bring a laptop into the barn and use a wand connected by a long cable to read the ID tags. "If you've been around cows, the word for that is stripid," he says.

for that is stupid, he says.
The government's IS-digit
bovine ID standard and the
ISO-compliant RFID tags
provided a common identification technology that is
lowering costs, Eicker says,
but "Bluetooth was the technology that got rid of the

wires and broke this open." Technology also plays a key role in feed management. At Diamond's Ranch in Waterford, Calif, manager Tom Sawyer uses iPags and Wi-Fi links to monitor the feed mix provided to about 1,300 cows. "We feed for performance. That's where the money is: Sawyer saws.

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Ten Xsys Inc., which made its name building telemetry devices for the space program. Is in the process or launching a temperature sensor called SmartBolus that's designed to sit harm-lessly in a cow's first stomach. The battery-powered pill-shaped device, which is 4.3 in. long and has a diameter of 1.3 in., lasts about four years. (It can't be removed; when power runs out, an other is introduced.)

It takes temperature readings and uses a transponder to transmit that data 96 times a day to a solar-powered repeater in the corral. The repeater relays the readings to a PC in the office, and

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Great Gadgets for The Digital Nomad

Zago's Invisible Shield covers

If your workspaces include airports, hotel lobbies and coffee shops, these devices can help. By **Brian Nadel**

HEN YOU'RE OR the road, you can't call upon the resources that officebound employees enjoy But whether your temporary workspace is a table at Starbucks, a hotel lobby, an airport or a client's lunchroom, you've still got to get the work done.

Any gear that you lug around has to be small, light and reliable. Here are some great gadgets that any digital nomad will want to consider.

PRINT SHOP TO BO Forget about waiting at a



copy report. Planon's Printstik PS910 is a go-anywhere print shop. It weighs just 1.5 lb., is powered by a lithium-ion battery and fits easily into a notebook bag. yet it can print from a smart phone, handheld or notebook. either through a USB cable or wirelessly via Bluetooth.

The \$300 printer uses thermal technology; a package of three rolls of thermal paper costs \$25. That means you get only monochrome documents, but if you really need a quick sales letter, a

map or a proposal, the Printstik could be invaluable.

POWER CENTRAL

with IISR Charner

So much work, so few power outlets - it's the nomad's constant dilemma. To the rescue: Belkin's Mini Surge

Protector with USB Charger. It turns a single AC outlet into three delivering electricity to you and those around you. (Sharing that outlet may get you good karma or even a free latte.) It also provides a pair of USB ports for charging phones, handhelds or media players. And it rotates so that it won't block

the second outlet on the wall. The Mini Surge Protector weighs just 6 oz., but it packs a powerful punch when it comes to saving batteries. The device costs \$25 but is well worth it - not the least because it carries a \$75,000 warranty against damage from a power spike.

CLEAN MACHINE It may not be able to stop a coffee cup from tipping over, but Zagg's Invisible-Shield keyboard cover can keep a spill from turning into a digital disaster. Made of an ultrathin plastic film. the type-through cover keeps liquids, dust and who knows what else out of your notebook's delicate keyboard. When it gets dirty. just wipe it clean. The \$35 cover has been precision-cut for a wide variety of notebooks and comes with a lifetime guarantee that it won't scratch or wear out.



I FAN AND ORFEN

Why spend valuable work time searching in vain for an AC outlet when the sun can power your phone or other equipment? The Solio Magnesium Edition portable solar charger from Better Energy Systems has three photovoltaic solar panels that slide out to provide a total of up to 9 watts of power. This will give you 15 minutes of cell phone talk time for every hour in the sun.

Solio Magnesium's charger comes with a USB adapter tip, plus you get a coupon for another tip of your choice from iGo.com. If you'd rather carry your solar power on your back, you can get Voltaic's solar backpack for \$249. It puts out 4 watts of nuice, has its own battery and comes with 11 power tips so it's sure to fit your equipment.

KEEPING SECRETS

The Fellowes Privacy Filter is essential equipment for mobile workers trying to keep secrets. Whether the sensitive document is a spreadsheet for your company's upcoming IPO or the private portion of a friend's Facebook page, this monitor filter will prevent most bystanders from seeing what's on your screen. Only those looking straight at the screen can see anything, so digital



Peeping Toms peering sideways over your shoulder will see only a black screen Available for 12 I- to 15 4-in displays, the filter costs about \$35.

WRITE ON

When recording a meeting and taking notes is not enough. Livescribe's Pulse Smartpen lets you do both by linking your handwritten notes to what was said "live."

The Pulse Smartpen includes an audio recorder that can play back exactly what was said when you press the pen to any place in your notes. The only catch is that you need to use one of Livescribe's special 100page notebooks; a four-pack costs \$20. O The \$150 charcoal blue

pen looks and feels good. weighs 1.3 oz. and can record up to 200 hours of notetaking activity. The software puts it all together, along with cool apps like a translator and transcription service, but it works only with Windows computers.

A GOOD CALL HPS iPag 910 Business

Messenger may look like an ordinary smart phone with a screen on top and a thumb keyboard below for tapping out e-mails, quick memos and instant messages. But beyond calling and Web surfing over a 3G GSM quad-band mohile phone network. this 5.3-oz. smart phone can link with an 802.11b/g Wi-Fi network. whether it's at a coffee shop or a client's office.



MOBILE & WIRELESS



Other features include built-in Google Maps with multimodal GPS navigation. mobile versions of various Microsoft apps and an alphanumeric OWERTY keyboard. The iPag 910 costs about \$500.

MAKE THE CONNECTION Never seem to have the right cable - or is it always buried

in the bottomless pit of your notebook bag? Meritline's Ultimate Cable Kit (\$26) can help you make the connection with retractable FireWire, USB, telephone and Ethernet cables and all the adapter tips needed to plug just about any peripheral into your computer. It all fits into a black padded travel case and comes with a travel mouse and headphones.

For those who never seem to have the right AC adapter. IOGear's Gearluice (\$40) can charge up just about any phone, anywhere, The kit includes a power adapter and seven tips that work with an assortment of popular cell phones. media players and handhelds.

BIZ FLICKS

When it's time to pop a video clip into a presentation. onto your blog or up on YouTube, Pure Digital's

Flin Mino does the trick. A mighty mite of a camcorder. Mino weighs 3.3 oz., but it can capture a whole hour of TV-quality clips on 640-by-480-resolution video at 30 frames a second. For those in a hurry (and what digital nomad isn't?), the \$180 Mino can transfer clips directly to online video services such as AOL Video, YouTube and MySpaceTV. And if you're really in a hurry, you can buy an "action mount" that lets you attach the camera to your handlebars or helmet. Pinching pennies? The

Mino is actually at the head of the Flip class. To save a few bucks, opt for the slightly less sleek \$150 Flip Ultra or the basic \$130 Flip Video.

BUY THEIR SILENCE

Nomads need to work wherever and whenever they can, but the world is a noisy place, Aliph's Jawbone Bluetooth headset uses advanced digital signal processing technology to block out the racket going on around you and let your voice shine through during phone calls. It can't silence crying babies, traffic sounds or ringing phones on your end, but the people on the other end

of the call won't hear them.

Lighter and smaller than other headsets, the

latest version of the \$130 Jawbone weighs one-third of an ounce. And it's stylish, too, with a leathercovered ear loop and a variety of finishes. **Nadel** is a freelance writer based near New York and is the former editor in chief of

Mobile Comput-

ing & Communi-

cations magazine.



A HP's Pag 910 Business M



CARFERS.

Use your project management skills to land that prime position.

By Mary K. Pratt

MENT SKILLS

As a former project er, Joe Ruck knows that. And he knows that those same skills that produce corporate results are also personal assets.

The discipline that brings in a major IT project on time can also guide personal projects such as the search for a new job.

"Project management is going to improve your odds at getting a better job at better pay," says Ruck, who is

ROJECT MANAGE- . now CEO of BoardVanta Inc., a Menio Park, Calif.based provider of secure or boards and executives.

In fact, Ruck says a ague who recently d a job search landed a better position using project manager skills that helped him to stay on track and avoid jumping

at early offers. Here are some tips gleaned from project agement to help you successfully bring in the important job project: successfully bring in that all SET PROJECT OBJECTIVES.

One of the key concepts from project management is to define what success looks like. So start by articulating your vision of the job you want.

"Sit down in an organized way and examine where you've been. Think through the kinds of work you've done in the past five to 10 years, what you enjoy most and get the most meaning from, and why. That's a great way to make decisions about where you want to go next," says John A. Challenger, CEO of outplacement

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JOE RUCK, CEO BOAROVANTAGE INC., AND A FORMER PROJECT MANAGER

consulting firm Challenger. Gray & Christmas Inc. in Chicago.

As in any project, lean on your team. Get input from those close to you who can give you objective insights to those questions.

ESTABLISH A PROJECT TIMELINE AND MILESTONES. Every IT project has an implementation schedule

and a delivery date. Your job search should have those too. says Karyl K. Innis, chairman and CFO of The Innis Co., a Dallas consulting firm. Granted, you can't guar-

antee the start date of a vetto-be-found job, but Innis says most people have a target date in mind. For example, you may want to land a new position in advance of expected changes at your current job or before your

severance money runs out. Once you commit to that time frame, establish some milestones. Schedule dates for tasks such as finishing your résumé and research-

ing companies. "You can build a schedule that will give you a sense of

whether you're on track or not " Ruck says

PLAN FOR CHANGES All project managers encounter obstacles, so it's better to think early on when you're objective, about which exigencies would make you revise your plan, says Dave Van De Voort the Chicagobased principal consultant of IT functional effectiveness at global consulting firm Mercer LLC. For example. determine whether you'll compromise on location or nay demands if you don't get any offers. And figure out how long into the job search

you'll wait before making PREPARE, THEN IM-PLEMENT, Consider your most valuable skills and your

those changes.

place in the current market. Spruce up your résumé and write cover letters. Make a firms, colleagues and per-

list of the recruiters, search sonal networks - including on LinkedIn and other on line social networks - that can belo you reach your goal, Determine which Web sites and job banks you'll search for leads. Compile lists of companies where you might want to work and the roles you would seek, then narrow them down, focusing on those that would fit best. Then move into the next

phase: implementation. Make those calls and line up those meetings, confident that you're on the right track. "You place the phone calls

to those on your target list, and you'll know what you'll say because you've prepared that script," says Innis, who has managed large-scale and global projects for tech companies such as Motorola Inc.

DOCUMENT PROGRESS, Successful project managers documen their plans and their progress. You should be just as diligent in your job-search project, says Van De Voort, who has taught projectmanagement-related courses at Ohio State University and the Graduate School of Business at Capital Univer-

sity in Columbus, Ohio. Documenting your work helps you keep track of what you've done, what you're committed to and what you need to follow up on important points that can easily get lost in the shuffle when you're already working a full-time job or, conversely, unemployed and out of your regular daily routine.

The epoxy for the modern IT executive.

Documenting your steps also helps you measure your progress against your timeline. Van De Voort says.

Adds Challenger "Documentation is so important. because you can use it to hold yourself accountable. It makes you do the work."

REVIEW AND MAN-AGE CHANGE, Review your progress regularly, says Scott McMillan, the New York-based chief people officer at Capgemini in North America, who as a former IT consultant managed various projects. Look at what you've done, prepare for the next steps, and ask whether you're still on track or need to adjust your plans or objectives. Don't be surprised if you sometimes find yourself off

track; all projects have at

least some slippage. When

Project in Peril

Here are six slip-ups to avoid in vo ich search project:

- # Setting unrealistic expectations on anything from how quickly contacts will return your calls to how big a salary you can command.
- = Seing too narrow in your search. Don't target only U.S. companies and overlook
- foreign businesses with U.S. operations.
- Working too few regular hours on the job search project. Cruising the Internet

and networking at lunch every now and then inst isn't enough.

- = Failing to get an honest, objective review of your résumé. Everyone needs
- an editor. = Stalling at the Initial steps, Don't spend
 - too much time on introspection. It can lead to analysis naralysis II Taking too long to respond to poten-
 - tial leads. Employers aren't going to wait for your phone call.

- MARY K. PRATT

your project slips, figure out why Innis says. Good documentation

helps you do that: You can track trends. like lots of first interviews but no callbacks. When you see a negative trend, ask your team of trusted advisers to help you determine why it's happening. Adjust your project plans,

timeline or objective based on what you learn, using the criteria for change management that you established at the onset of the project.

PERFORM A POST-MORTEM. Your work on your job search isn't done when you land that dream job, "When

all is said and done, it's good to evaluate how it all went and prepare yourself for the next time around." Van De Voort says, "because in the reality of today's world, there will likely be a next time." Pratt is a Computerworld contributing writer in Waltham, Mass, Contact her at marykpratt@verizon.net.

You need to create a bond between business and IT.

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Proceed with confidence.™ To find out more, visit www.cognos.com/epoxy today.



A Major Project Slips **Through the Cracks**

Every project is supposed to **involve** security early on. So how did a virtualization effort get so far without it?

NCE AGAIN. I'm the bad guy. scale virtualization project was about to be deployed when the project team showed up seeking my sign-off. I can't approve anything without a proper assessment, so I told them I'd need two weeks Naturally the IT guys weren't too thrilled. But I've sent the word out to everyone before: Pull security into every project early on, or live with lasttion big time. minute delays.

Because it had become clear to me that just delivering that message (even doing it dozens of times) wasn't enough, I managed a few months ago to have security embedded into the project life-cycle management process. We even have a new online project management tool to ensure that every step of every project is properly completed. Unfortunately, several projects that were already in progress were "grandfathered" in and therefore weren't being tracked online. One of these was server virtualization.

This is a huge project, involving the virtualization of some 250 critical servers. You'd think I would have heard something about it before now. Well, chalk this lapse up to efficiency and competence. As big as the project is, very few meetings were needed. That's because IT had run a trial about a year and a half ago. virtualizing just a handful of servers. That went well. and so the team was able to just scale up that earlier effort to enter the virtualiza-So I have my two weeks,

but at this point. I have no choice but to compromise on several issues. One problem is that moving to a virtual environment involves taking an image of each server. That precludes what would have been a great opportunity for increasing our security. A lot of our Windows servers aren't up to date with patches. That's be-

At this point, I have no choice but to compromise on several issues.

cause we lack development environments for many of our applications, and adding patches without testing first is just asking for trouble. The imagetransfer method robs us of a chance to take care of the problem; once those virtual servers are up and running, they will be just as problematic to patch as the old physical servers.

Another opportunity lost: We could have used the move to virtualization to properly segment our network, which currently is basically flat. You don't get many windows to address a problem like that. Now, instead of improving the situation. I am left worried that by moving our servers to this new environment, we will be intro-

ducing new attack vectors. These are the sorts of things we could have talked over if I had been involved earlier. At least the number of grandfathered projects is shrinking; eventually, everything will be tracked online.

I don't really have time to do the assessment, what with my involvement in ensuring that our recent

Trouble **Ticket**

shout to be virtualized. ACTION PLAN: Call in an expert to assess as much of the project as possible before it goes live.

acquisitions meet our security requirements. Anyway. I'm not a VMware security expert, and I don't have the time to become one. Finally, for such a major infrastructure change, it's probably best to bring in a disinterested third party to provide an unbiased perspective.

CALLING THE EXPERT With all that in mind, I

gave a consultant a call. Every security manager should have on speed dial a couple of people he trusts who have expertise in certain core areas. During a recent M&A assessment. this consultant performed a thorough evaluation of an acquired company's virtualization infrastructure. He assured me that his

skills were undated and that he was ready to go. I briefed him on the scope of the assessment, and he prepared a statement of work.

Within a week. he was on-size. conducting meetings, obtaining access to

the various pieces of infrastructure and conducting tests to provide me with a meaningful review. I expect his report soon. This week's journal is written by a real security manager, "Mathias Thurman." whose name and employer have been disguised for obvious reasons. Contact him at mathias thurman@

vahoo.com.

SMART MFPs? HOW ABOUT GENEROUS TOO?

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between more productive. That's alternative thinking above.

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Preston Gralla

Don't Bet It All on Google Chrome

HINK THAT Google's much-ballyhooed new Web browser, Chrome, is aimed at helping people surf the Web? Think again.

The browser instead takes dead aim at Microsoft Office and Microsoft Exchange. If Google has its way, your enterprise will use Chrome as a platform for Web-based

applications from Google. You'll abandon Office, Outlook and others, and you'll bid Microsoft goodbye.

Any surfing you do with it, from Google's point of

view, is pure gravy, Even though the world has greeted Chrome as a consumer-level browser. Google didn't conceive of it that way. In a blog post on the company's Web site, Sundar Pichai, vice president of product management, and Linus Upson, engineering director, made no bones about what Google wanted to do when it designed Chrome: "We realized that the Web had evolved from mainly simple text pages

Web had evolved from mainly simple text pages to rich, interactive applications and that we needed to completely rethink the browser. What we really needed was not just a browser, but also a modern platform for Web pages and applications, and that's what we set out to build." To that end, Chrome is the first browser built from the ground up for a world in which the browser is an enterprise front end for Web-based applications and services such as

Google Docs and Gmail. Chrome is designed to work mostly with AIAX and Web 2.0 applications. Google built its own Java-Script virtual machine. called V8, for running Java-Script. In addition, each tab in Chrome runs as a separate browser, so that if one tab gets busy, bogs down or crashes, it won't affect the other tabs. And Chrome comes equipped with Google Gears, a kind of glue for binding Webbased applications to your hard disk.

■ With Chrome, Google is selling a proposition: Give up Microsoft for Google. But should you buy? or Web-based
Chrome even includes
features that make it appear as if Web-based
applications are really
software running on your
own PC. You can create
desktop shortcuts to Web
applications that, when
double-clicked on, run in
a special window that has
no hornware controls—no

bar. All you see is the application itself, as if it were a desktop application. Google hopes that once enterprises use Chrome as a platform, they will abandon desktop-based applications for Web-based ones and desert Microsoft Office and Exchange for

tabs, buttons or address

Google Docs and Gmail. So it's clear that with Chrome, Google is selling a proposition: Give up Microsoft for Google. But should you buy?

The answer is not yet, not by a long shot. Chrome itself is still an early beta product. Given Google's tendency to keep



its software and services in beta for years — Gmail is still in beta, and it was launched in 2004 — don't expect it to come out of beta for a while.

In addition, Google Docs simply isn't up to the standards of Office It's rudimentary and lacks too many features. And the Web itself still isn't fast or reliable enough for cornorations to give up Office. Reyond that there are training, deployment, stability and management issues. And many enterprises have standardized on Internet Explorer and use ActiveX controls, which Chrome doesn't support. Abandoning all that would take an enormous amount of time and resources

Microsoft also has a long, proven track record with enterprises. Google, as of yet, doesn't.

Robert Fort, CIO at Virgin Entertainment Group, summed up the problem: "I give Google all the credit in the world for innovative solutions, but to Microsoft's credit, they've got a lot more of an enterprise attitude."

Fort is right. So it's a good idea to give Chrome a test-drive. But as new and shiny as the browser may be, it's not yet time to bet the enterprise on it. 8 Presten Gralla is a Computer world contributing editor and the author of more than 35 books, including How the Internet Works and Windows Vista in a Nutshell. Contact him a Nutshell. Contact him a Nutshell. Contact him

at preston@gralla.com.

Spotlight on the T Workforce

obers aren't adding up. Hundreds of thousands of jobs are expected to open up in the technology sphere in the next decade, but not nearly enough new workers are lining up to step into those positions. We asked two industry leaders to address this looming shortfall, and they responded with very different ideas. But you don't have to choose one over the other. Both of these approaches, as well as others, could help address this workforce crisis.

Companies Can't Afford to Lose Their Best IT Pros

HE DEMAND for IT professionals with suitable skills continues to be high, even with the threat of recession. In fact, "attracting, developing and retaining IT professionals" replaced "IT and business alignment" as the top concern for IT executives in last year's Society for Information Management survey of key IT trends. In an industry whose long-term annual turnover has typically been over 20%, a thoughtful retention strategy is essential for every IT organization. The turnover of skilled IT pro-

fessionals is very expensive and discriptive Recogiting isn't cheap. Advertising, interviewing and training all cost money. Less abvious is the productivity impact; the new hire has to climb the learning curve, and the company-specific knowledge held by the departed professional is lost forever.

So, how do you retain the IT professionals you have? Offering a good salary is a start, but there are other key factors.

Most important is open and honest communication, followed by good worker-supervisor relationships. IT professionals like to be asked for their input and to feel that they influence IT-related decisions. They want respect and recognition from their supervisors, and they want to be appreciated as valued members of the organization. The top priority

for organizations should be creating a challenging work environment by leveraging new technologies. demanding creativity in addressing complex IT issues and providing access to continuous learning all white opening the communication lines.

Another important factor is autonomy and flexibility. Rapid change in technology requires constant undating of skills, and companies that provide training can benefit in two ways: They ensure that their IT professionals are prepared to apply emerging technologies effectively to meet business demands, and

> that they are interested in advancing their careers. That's important because IT professionals who feel that there is no opportunity for career advancement are sure to look for greener pastures. regardless of how

they signal to staffers

much you're paying them. Providing a balanced education program that includes business/management, industry, and interpersonal/comm nication skills is fundamental. Another consideration is work/life balance, Giving IT professionals

flexibility in their work schedules. the ability to work from home, desirable amenities, greater benefits. and generous vacation and holiday packages goes a long way toward enhancing morale. Organizations must anticipate the needs of IT



professionals and proactively ad-

The pipeline of IT professionals with the appropriate balance of skills is falling short of demand. If you don't want to find yourself scrambling to maintain effective staffing levels, you should be doing all you can to

keep your current workers happy. motivated, prepared and fulfilled

- Jarry Luftman, a former CIO, is associate dean and a distinpuished professor for the graduate IS programs at Stevens Institute of Technology. He can be reached at ierry.luftman@stevens.edu.



address this workforce crisis.

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JERRY LUFTMAN much you're paying them. Providing a balanced education program that includes business/management. industry, and interpersonal/communication skills is fundamental.

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Let the Kids Do It: Bringing A New Generation to IT

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- Jerry Luftman, a former CIO, is associate dean and a distinmushed professor for the graduate IS programs at Stevens Institute of Technology He can be reached at unry.luftman@stevens.edu.

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TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Requirements

New office space is carved out of a big mechanical room on the 12th floor of this haspital wing, and it's really out of the way - the elevators for ple only go up to the 11th floor. But that's a minor annovance to this networking pilot fish, "Hospital cabling standards are no cooper Ethernet between floors, fiber only," he grumbles. "Not only was the rule violated, but the copper that went to the floor below was not properly secured, had no service loop on the 12th floor and had no strain relief at the floor level And there's no slack for anything new going above the ceiling - like air conditioning

utions. And to add insult to injury, the new office's bathroom is wheelchairaccessible, approximately 160 square feet. Remember. no elevator access...."

How It's Done Pliot fish with lots of tech know-how and a fresh set of certifications gets a job doing of work, we got a ticket for think much of it, but my box

IT support at a fashion retail company. "On my third day a user whose mouse didn't work," fish says. "I didn't told me to grab a mouse and follow him." At the user's desk fish can't believe his eyes as the user demonstrates the problem by moving the mouse wildly around on

her desk - mouse pad and all. But his boss calms her down, then simply files the se pad over so the rub ide is down and the smooth side is up. "At that point, I was expecting a 'duh,' " says fish. "But instead, my boss got a hug and a loud Thank you! You are so smart! I wish Lunderstood these computers better!" It took everything in my power to not laugh out loud. I just bit my tongue and walked away. My boss later told me that it wasn't the first time he'd had that type of call

in this building." Job. Redefined

Flash back to the days of terminals connected to the mainframe by coaxial cable and a pilot fish whose job is well defined - or so he thinks. "I worked for a company that had a very strict job respo bility structure," says fish, "If a task that needed doing was not in your job description, you had to call the person

whose job it was. One morning, my manager called me into her office to diagnose a problem with her terminal. From the status line, it was obvious that it was no long nected to the control unit. Since there was construction happening on the ground floor. I figured that the coax had been cut, so I told her that I would get Wally, whose job it was, to take a look at it: She fixed me with an icy stare and just said. 'Fix it!' So much for job descriptions."

■ Sharky's job description includes getting you to send me your true tale of IT life at sharkv@computerworld. com. You'll score a sharp Shark shirt if I use it.

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CHECK OUT Sharky's blog

ECOMPANIES IN THIS ISSUE

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Frankly speaking Frank Hayes

Um, What Noise?

HEY SAY that if you have a jackhammer operating nearby, the noise will be incredibly annoying at first, but as time goes by, you'll get used to that loud background noise. In time, you won't even hear it. I'm writing this column with a jackhammer pounding on concrete 20 feet away Well see just how true that is.

concrete 20 feet awa In IT, we get used to background annoyances too. Temporary work-arounds become permanent. Rebooting to solve software problems becomes routine. Pidgin magic to handle flaky hardware is passed down from one systems administrator to another.

After a while, we don't think of those things as problems. We don't even notice them.

Know who does? New

employees.
They're the ones who are astounded at what their co-workers put up with. They can't understand why all the old hands tolerate a kludgy procedure, why they're unfazed by a network that often suddenly stops responding, why they never, ever go near the online help system.

At least, they're astounded at first. Soon enough, they learn that the kludgy procedure is the one known-safe path through a minefield of legacy bugs. And that the network freezes at predictable times that are easy to work around. And that entering the help system wipes out all your current work.

And in short order, they'll be doing things the way everyone else does. They won't think of those once-astounding annoyances at all. They won't even notice.

And an opportunity for IT will be lost. Every new hire is a

fresh set of eyes. He sees the problems that everyone else ignores. We can use that. But we have to get the timing right. It's not much good

Every new hire is a fresh set of eyes. He sees the problems that everyone else ignores. We can use that.

to ask a new employee about annoyances as soon as you set him up with his PC. Until he learns procedures and gets into the swing of things, he won't know how to answer.

know how to answer.

And after two or three
months? By then, the new
guy will have been assimilated into The Way
We Do It Here. What was
at first as jarring as jackhammer noise, he'll no
longer notice.

But somewhere in between, there's a sweet spot. Use it.

About three weeks after setting up each new hire, send an IT's support person to his desk for a chat and a "system checkup." Be sure to schedule it with the employee first. Sending along a standard checklist is probably a good idea too.

And make sure your support tech knows what to do: Ask how everything is working, if there are any problems and if there's anything



IT-related that the employee doesn't understand. Take notes. Nod a lot. Smile. Don't try to explain anything; just listen and write, then do a quick check of the PC's software and hardware.

Some users won't say much. Others will complain about everything. But from the rest, you can gain useful intelligence about how your systems

are actually working. You'll find out that users are still raught to use work-arounds that are no longer necessary. You'll discover software and network glitches you thought were minor but actually cause users a lot of pain. You'll spot gaps in the way you train users. (You'll also discover what unautborized software and hardware the user has smuested in but

that's just a bonus.)
In short, you'll get the maximum benefit from that new hire — before he's blind and deaf to all those virtual jackhammers that everyone else

ignores too.

As for my real jackhammer — well, after a
few days of this, maybe I
won't hear it either.

I'll be deaf. ■
Frank Hayes is Computerworld's senior news
columnist. Contact him
at frank_hayes@
computerworld.com.



Congratulations Award Recipients!

Business Intelligence Perspectives proudly announced the results of this year's "Best Practices in Business Intelligence" Awards Program. This program honors IT users "Best Practice" case studies selected from a field of qualified finalists.

Honoree Awards Recipients in each of the following categories were recognized at Business Intelligence Perspectives in Phoenix, Arizona, on September 10th:

Finalists in each of the following categories are:

Creating an Agile BI Infrastructure

Marriott International, Inc., Bethesda, Maryland

Finalists: • Abbott International, Abbott Park. Illinois

- USPS IT Delivery and Retail Business Systems Portfolio, Washington, DC
 - . United Network of Organ Sharing, Richmond, Virginia
 - USCG, Office of Performance Management and Decision Support,
 Washington, DC

Driving Process Management with BI

FedEx Services. Collierville. Tennessee

- Finalists: New York City Department of Information Technology and Telecommunications, New York, New York
 - The Salvation Army, USA Western Territory, Long Beach, California
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